



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,239	09/18/2006	Freddy M.J. Tjink	129069	7362
25944	7590	09/29/2009		
OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850			EXAMINER SINGH-PANDEY, ARTI R	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 09/29/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/593,239

**Applicant(s)**

TIJINK ET AL.

**Examiner**

Arti Singh-Pandey

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) 13-15, 18 and 19 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-12, 16 and 17 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 18 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 09/18/06  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-12, 16 and 17 are drawn to the method of coating a yarn, classified in class 264 or 156 in various subclasses.
  - II. Claims 13, 14, 15, 18 and 19 are drawn to the coated yarn, classified in class 428, subclass 375+.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case there are many methods of coating a yarn such as dip coating after the yarn is formed with the desired coating, or alternatively you could impregnate the coating.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;

- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

3. During a telephone conversation with Mr. Chris Brown on 09/15/09 a provisional election was made **WITH** traverse to prosecute the invention of **Group 1, claims 1-12, 16 and 17**. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13, 14, 15, 18 and 19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder.

All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

***Specification***

4. The disclosure is objected to because of the following informalities: In paragraph 0014 the instant specification refers to Claim 1 and not the current text of the claim. This needs to be rectified by adding the text of the current claim. The reason it cannot be referred to just as the claim number is because the claims may be amended at any time. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-12, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5573850 issued to Cunningham et al.

7. The disclosure of Cunningham et al relates to an abrasion resistant quasi monofilament, as well as to a sheathing composition used in a process to make the quasi monofilament. More particularly, this invention relates to a quasi monofilament having a high strength polyethylene fiber core with an adherent, abrasion resistant polymer sheath and to the sheathing composition used to make same. In column 1, the Applicant describes the quasi monofilament yarns to a single untwisted filament which actually comprises a sheath/core yarn. The core of the yarn is usually a polyethylene filament (column 2) for other preferred compositional makeup of the yarn see Column 3, lines 50+. At column 4, lines 34+ is where the instant specification describes how the

monofilament is created. It states in a nutshell, that the continuously feed core multifilament yarns is extruded through a crosshead die while simultaneously supplying a polymer melt at a temperature greater than the melting point of the core yarn to the die, for (c) sheathing the core yarn within the die with the melt under a sufficient pressure to cause the melt to adhere to the core yarn; and (d) cooling the sheathed yarn to below the melting point of the polymer melt. The preferred process will depend upon the application; with sports fishing lines, the preferred process includes the optional step of twisting. The quasi monofilament article can be made by contacting the core yarn with the desired sheath material where the sheath material is in a melt state.

Advantageously, the core yarn is withdrawn from a supply source and continuously fed through a melt of the sheath material in a crosshead pressure extrusion die where it is sheathed. From the die, the sheathed yarn travels through a cooling zone to be taken up. A crosshead pressure extrusion die is also known as a wire-coating pressure die. In FIG. 1, die 23 is held in place against crosshead die body 21 with die retaining ring 24 and associated bolt 25. Crosshead die body 21 has a melt feed channel 28 therein, characterized, as is typical of crosshead dies, by a 90 degree bend. Core tube 27 and associated guider tip 22, which have an axial bore 29 for passage of core yarn 26 there through, are mounted within crosshead die body 21 so as to define an annular melt delivery channel at the exit end of guider tip 22. The exit end of guider tip 22 is within die 23. Core yarn 26 enters axial bore 29 of core tube 27 and exits from guider tip 22 (left to right in the drawing figure). The melt, supplied by an extruder (not shown) to melt delivery channel 28 through entrance 30, flows around the 90 degree bend into the



annular melt delivery channel to contact moving yarn 26 at the exit end of guider tip 22 inside die 23. The melt sticks to and is pulled by moving yarn 26 to sheath the core yarn 26. From the exit of die 23, the sheathed yarn passes through an air gap to a water bath (not shown) where it is cooled to below the melting point of the polymer melt. From the water bath, the cooled sheathed yarn is taken up (also not shown). The water bath can be eliminated by providing an air gap sufficient in length to cool the sheathed yarn to below the melting point of the polymer melt; in this case, the yarn runs through the cooling zone (air gap) to a pair of rubber covered nip rolls to be taken up. If the option of stretching the core yarn simultaneous with sheathing is desired, a conventional yarn feeding device can be provided, upstream of the crosshead die, with the capability of restraining the yarn against the tension of a take-up device located on the exit side of the crosshead die. The processing conditions, particularly the melt temperature, pressure, and flow rate, and the yarn velocity are such that the sheath material adheres to the core yarn. There are several alternate pretreatments available. The surface of the core yarn can be exposed to a high voltage corona or plasma. Additionally or alternatively, the surfaces of the individual fibers of the core yarn can be primed with an effective amount of a resin having ethylene crystallinity and a melting point of less than about 135.degree. C. Preferred primers are ethylene-acrylic acid copolymers, ethylene-acrylic acid polyamide graft copolymers manufactured by AlliedSignal, Inc. The primers are preferably applied to the yarn as dispersion in water and the yarn then dried. Alternatively, the surface of the core yarn can be scoured to remove any residual finish therefrom. As yet another alternative/additional pretreatment, the surface of the core

yarn can be wetted with an effective amount of mineral oil to soften or solvate the surface: These two latter pretreatments preferably occur prior to twisting.

Therefore, the instant application discloses a method of creating a yarn which has contact with a dispersing agent and a coating agent, the coating agent being a polyolefin and the dispersing agent being water. The yarns are guided each step of the way, the only two things not specifically disclosed by Cunningham et al is that the coating agent is PVC or polyethylene terephthalate.

It is the position of the Examiner that using either one of these most commonly used chemicals is widely practiced in the art of textiles. A skilled artisan would have found it obvious to have employed a PVC coating at the time the invention was made. One would have been motivated use it as PVC has polar groups (chlorine), and is amorphous, therefore mixes well with various other substances. The required physical properties of end products (e.g., flexibility, elasticity, impact resistance, anti-fouling, prevention of microbial growth, anti-mist, fire retarding) can be freely designed through formulation with plasticisers and various additives, modifiers, and colouring agents. PVC is the only general purpose plastic that allows free, wide and seamless adjustment of the required physical properties of products such as flexibility, elasticity, and impact resistance, by adding plasticisers, additives, and modifiers. Since the physical properties of end products are adjustable through compounding with additives, only a few types of resin are required to cover all applications (fibre, rigid and flexible plastic, rubber, paint, and adhesive). This controllability is also extremely beneficial for recycling. The polar groups in PVC contribute to ease of colouring, printing and

adhesion. PVC products do not require pre-treatment, which enables a wide variety of designs. PVC is used in various decorative applications taking full advantage of its superior printability, adhesion properties and weatherability.

A skilled artisan would have found it obvious to have employed a PET yarn in place of the suggested polyolefin at the time the invention was made. One would have been motivated use it as to create a final composite fabric which has excellent tensile strength.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arti Singh-Pandey whose telephone number is 571-272-1483. The examiner can normally be reached on M-R 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Arti Singh-Pandey/  
Primary Examiner  
Art Unit 1794